

**DETAILED ACTION**

**EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Hyung N. Sohn on April 28, 2011.

**Claims 25 and 26 have been amended as follows:**

25. (Currently amended) A Media Resource Function node for use in a cellular telecommunications network, the node handling media sent between itself and user equipment over a Real-Time Protocol managed link, the Media Resource Function node comprising:

means for sampling a rate of packet loss on the link and/or means for receiving a sampled rate of packet loss on the link from the UE;

means for applying a sliding window to the sampled values and calculating an average or other statistically representative loss rate across the window;

means for comparing the representative loss rate to a pre-defined acceptable loss rate;

means for decreasing the sending rate if the representative loss rate exceeds the acceptable loss rate and if a pre-defined time period has elapsed since the sending rate over the link was last adapted; and

means for increasing the sending rate if the representative loss rate is less than the acceptable loss rate and if a pre-defined good performance time period has elapsed since the sending rate over the link was last adapted,

wherein in the event that the pre-defined time period and the pre-defined good performance time period have not elapsed since the sending rate was last adapted, the Media Resource Function node keeps the sending rate over the link unchanged.

26. (Currently amended) User Equipment for use in a cellular telecommunications network, the User Equipment communicating with a Media Resource Function handling media sent between the user equipment over a Real-Time Protocol managed link, the User Equipment comprising:

means for sampling the rate of packet loss on the link; ~~and~~

~~means for sending the sampled rate or an analysis of that rate to the Media Resource Function,~~

~~wherein the means for sending the analysis of the sampled rate comprises:~~

means for applying a sliding window to the sampled values and calculating an average or other statistically representative loss rate across the window;

means for comparing the representative loss rate to a pre-defined acceptable loss rate;

~~means for sending to the Media Resource Function an analysis of whether the representative loss rate exceeds the pre-defined acceptable loss rate and a pre-defined time period has elapsed since the sending rate over the link was last adapted; and~~

~~means for sending to the Media Resource Function an analysis of whether the representative loss rate is less than the pre-defined acceptable loss rate and a pre-defined good performance time period has elapsed since the sending rate over the link was last adapted~~

means for decreasing the sending rate if the representative loss rate exceeds the acceptable loss rate and if a pre-defined time period has elapsed since the sending rate over the link was last adapted; and

means for increasing the sending rate if the representative loss rate is less than the acceptable loss rate and if a pre-defined good performance time period has elapsed since the sending rate over the link was last adapted.

wherein in the event that the pre-defined time period and the pre-defined good performance time period have not elapsed since the sending rate was last adapted, the User Equipment keeps the sending rate over the link unchanged.

#### **Allowable Subject Matter**

2. Claims 14-15, 20-26 are allowed.
3. The following is an examiner's statement of reasons for allowance:

Claims 14 and their dependents thereof, are allowed because the closes prior art, Fischer (US-2002/0163932); Vimpari, Markku (US-2003/0117972), Cavin, Robert D (US-2003/0126492), Gannage (US-2004/0151158), Li (US-2005/0128954), Hiddink (US-2005/0143027), Bauann (US-7,047,309), either alone or in combination, fails to anticipate or render obvious a method of optimising the bandwidth usage on a Real-Time Protocol managed

link transporting media between User Equipment and a Media Resource Function of a cellular telecommunications network, the method comprising:

sampling, at one of the User Equipment and the Media Resource Function, a rate of packet loss on the link;

applying a sliding window to the sampled values, and calculating an average or other statistically representative value across the window at one of the User Equipment and the Media Resource Function;

comparing the representative loss rate to a predefined acceptable loss rate at one of the User Equipment and the Media Resource Function;

if the representative loss rate exceeds the acceptable loss rate and if a pre-defined time period has elapsed since a sending rate over the link was last adapted, then decreasing the sending rate over the link at one of the User Equipment and the Media Resource Function;

if the representative loss rate is less than the acceptable loss rate and if a pre-defined good performance time period has elapsed since the sending rate over the link was last adapted, then increasing the sending rate over the link at one of the User Equipment and the Media Resource Function; and

in the event that the pre-defined time period and the pre-defined good performance time period have not elapsed since the sending rate was last adapted, keeping the sending rate over the link unchanged.

Claims 25 and 26 are allowed because the closes prior art, Fischer, Vimpari-Markku, Cavin, Robert D, Gannage, Li, Hiddink, Bauann, either alone or in combination, fails to anticipate or render obvious a Media Resource Function node and User Equipment for use in a cellular telecommunications network, the node handling media sent between itself and user equipment over a Real-Time Protocol managed link, the Media Resource Function node comprising:

means for sampling a rate of packet loss on the link and/or means for receiving a sampled rate of packet loss on the link from the UE;

means for applying a sliding window to the sampled values and calculating an average or other statistically representative loss rate across the window;

means for comparing the representative loss rate to a pre-defined acceptable loss rate;

means for decreasing the sending rate if the representative loss rate exceeds the acceptable loss rate and if a pre-defined time period has elapsed since the sending rate over the link was last adapted; and

means for increasing the sending rate if the representative loss rate is less than the acceptable loss rate and if a pre-defined good performance time period has elapsed since the sending rate over the link was last adapted,

wherein in the event that the pre-defined time period and the pre-defined good performance time period have not elapsed since the sending rate was last adapted, the Media Resource Function node keeps the sending rate over the link unchanged.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMOTHY PHAM whose telephone number is (571)270-7115. The examiner can normally be reached on Monday-Friday; 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne D. Bost can be reached on 571-272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Timothy Pham/  
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